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AUTHOR Barber, Clifton E.; Richburg, Robert W.
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ABSTRACT

A model is presented for developing an introductory gerontology course in which teaching strategies are aimed primarily at realizing affective rather than cognitive outcomes in the lives of students. The four course objectives are described in terms of the following areas: (1) examination of personal values and attitudes concerning aging and the aged; (2) development of empathy for individuals representing different generations and periods of adulthood; (3) expansion of the future time perspective; and (4) selection of alternative action plans. For each objective, the rationale, expected outcomes, and activities are delineated. Additionally, descriptions of several instruments which could be used to measure some of the expected outcomes are provided, including the Aging Opinion Survey (ADS), sematic differential self-description scales, the Attitudes Toward Planning Scale, and the Time Perspective Questionnaire. (HLM)

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EMPHASIZING AND MEASURING AFFECTIVE OUTCOMES IN AN INTRODUCTORY GERONTOLOGY COURSE[1]

Clifton E. Barber, Ph.D.
Department of Human Development and Family Studies

Robert W. Richburg, Ph.D.
Department of Education

Colorado State University
Fort Collins, Colorado

ABSTRACT

In an era when both the numbers and proportion of older adults in our society are rapidly growing, it is unfortunate that many of the attitudes and stereotypes about aging and the aged are erroneous and involve negative impressions. College students are among those who harbor such views; a situation that is unfortunate since it makes them fear their own aging and may also lead to divisiveness among age groups in society at large. This paper is predicated on the repeated observation that attitudes, beliefs, values and other affective aspects of learning exert an equal if not greater influence on a student's behavior than what he/she knows. Yet, in most curriculum areas--including gerontology--the emphasis is overwhelmingly on the cognitive aspects of learning. Presented in this paper are (a) a model for developing an introductory gerontology course that emphasizes an affective orientation to the study of aging; and (b) a design and suggestions for instrumentation to be used in assessing affective outcomes in such a course.

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EMPHASIZING AND MEASURING AFFECTIVE OUTCOMES IN AN INTRODUCTORY GERONTOLOGY COURSE

Writing in the Gerontologist several years ago, Looft (1973) noted with great concern that the bulk of our intervention efforts have favored cognitive development at the expense of affective development. He went on to question whether intellectual competence should be considered the "most hallowed" of all human attributes and to suggest that it may be a mistaken notion to assume that improving cognitive competence is the key to improving the quality of life. Racism, sexism, ageism and other forms of prejudice still take a tragic toll on human well-being in spite of large doses of psychological intervention aimed at improving intellectual abilities. Looft's (1973) proposal is that we should "create intervention strategies that place greatest emphasis on producing a more cooperative, a more compassionate, a happier kind of people" (p. 8).

Looft's observations and proposals have important implications for those of us attending this conference. As educators, we regularly intervene in the lives of our students and do so with the assumption that these planned classroom interventions will make them better people. However, as Looft (1973) reminds us, it is doubtful that these interventions, typically characterized by heavy handed favoritism toward the cognitive side of life, have beneficial effects on our students.

This paper will describe a model for an undergraduate gerontology course which is intended to emphasize affective outcomes. The model includes teaching strategies which attempt to influence student attitudes toward their personal aging as well as toward other age groups. The model is predicated on the assumption that attitudes have far greater consequences for the way people act than does what they know.

LITERATURE REVIEW

In Effectiveness of Cognitive Intervention Strategies

The literature is replete with studies where students' attitudes toward the aged and their own aging were measured before and after some kind of cognitive intervention. Fletcher, Cicchetti, Lerner & Coleman (1971), for example, assessed the attitudes of first year medical students before and after a semester long lecture course in the social aspects of medicine. The results yielded little change in attitude toward treating the elderly or in the medical students' estimates of the worth of the elderly in society.

Hudis (1974) developed an experimental level gerontology course for community college students. Though for research purposes attitudes were measured pre and post, the course was heavily knowledge oriented. Research type term papers were assigned. The final exam was by the author's description "a bluebook essay of the students' understanding and knowledge of the semester's work." Hudis concluded that there were no statistically significant attitude changes in her students.

Cicchetti, Fletcher, Lerner & Coleman (1973) reported a study of medical students' attitudes toward the aged at Yale University. In the treatment given the students, lectures on the problems of the aged were interspersed with opportunities for personal contact through interviews of elderly in New Haven. The pre and post attitude assessment again revealed no changes in student attitude.

Wager (1979), writing in Education Technology, discusses the kind of stimulus environment (instruction) that should be present to increase the probability of desired attitude change in any learning situation. He acknowledges that there is a knowledge component to most attitudes. Many times, attitudes are formed on the basis of inadequate information or misinformation.

He adds to this the importance of direct reinforcement of the learners behavior. This reinforcement can come from an instructor or from peers and in a number of ways. If the student knows that attitude formation rather than knowledge is the primary goals of a course and if in fact, grades are assigned on the basis of some factor other than performance on knowledge exams, there will be greater attentiveness to affect or attitude. Similarly, peer reinforcement through group discussion can have a powerful impact on attitudes. Quoting Hovland, Wager argues that "the student who participates in a discussion that makes a public commitment to an attitude is more likely to hold that attitude longer than a student who simply listens to a communication."

Bein (1970) supports Wager in arguing for active participation of the learner to promote attitude change. Both Wager and Bein comment on the value of instructional activities such as dramatizations, role playing and simulation to provide active experiential contact with their own attitudes.

Effectiveness of Affective Intervention Strategies

In general, research conducted on elementary, secondary and college students indicates that there are several teaching strategies that are effective in changing student attitudes. Simulation and gaming strategies, for example, have been widely tested as techniques for alternating student attitudes. Heinkel (1970) found that college students who played the game of Napoli showed more favorable attitudes toward government than those in a control group taught by conventional methods. Livingston (1973) in four separate studies using the simulation Ghetto game with players ranging from ninth grade through adulthood, found that those who participated in the Ghetto simulation developed more empathetic feelings toward poor people than a control group. Similarly, research has shown the effectiveness of teaching techniques such as role-playing (Elms, 1969), role reversal (Ringness, 1975),

values clarification (Raths, 1972), and case studies involving moral dilemmas (Kohlberg, 1973) in changing student attitudes.

A MODEL FOR COURSE DEVELOPMENT

Outlined below is a model for developing an introductory gerontology course in which teaching strategies are aimed primarily at realizing affective rather than cognitive outcomes in the lives of students. That is, the focus is on changing the attitudes and values of students rather than on enhancing their knowledge of adult development and aging. The model is founded on several basic assumptions and organized around four course objectives. Identified for each objective is (a) the rationale for positing it as an important course goal, (b) the outcomes it is intended to promote, and (c) several activities which could be used to produce these outcomes. Also included in the model are suggestions for measuring affective outcomes.

Assumptions

(1) Many of the students enrolled in college-level, introductory courses in adult development and aging are young adults who often harbor negative attitudes concerning their own personal aging and/or who believe in erroneous stereotypes concerning other age groups who have preceded them in the life course.

(2) The attitudes and values of young adults toward aging and other age groups are of critical importance in optimizing personal adjustment to aging and in minimizing intergenerational cleavages.

(3) Student attitudes and values concerning aging and the aged constitute a more potent determinant of successful personal adjustment and the quality of intergenerational relations than does student knowledge of the aging process.

(4) It is possible to alter student attitudes and values through the use of teaching strategies which are aimed at producing affective outcomes.

(5) It is possible to reliably measure these outcomes using groups of students as the basic unit of analysis.

Objective #1: To Recognize, Clarify, and Scrutinize Personal Values and Attitudes Concerning Aging and the Aged

Rationale. Life choices are based upon the values we espouse, whether we are consciously aware of them or not. Ideally, such choices are made when there is a clear understanding of and commitment to values which have been scrutinized by examining them within the context of alternative values. But this is the ideal. All of us, young or old, at some time or another are confused or even unaware of our values, particularly concerning aging. Mixed with the negative stereotypes of old age is a great deal of ambivalence and fear about growing old, a situation which for some young adults prevents them from closely and carefully scrutinizing their personal feelings about aging.

While courses in adult development and aging as well as death and dying are becoming increasingly popular among young college students, our experience has been that students; curiosity is still tempered with a great deal of apprehension about their own futures. They are interested in learning more about the elderly, but at the same time they find it extremely difficult to recognize and face the fact that they themselves are aging and will one day be old. They prefer to talk about the old -- those "out there" who are old -- rather than to discuss the personal experience of growing old themselves. It is our belief that students should have a clear understanding of their own values concerning aging and the aged if they are to achieve successful personal adjustment to aging.

Expected Outcomes. Activities aimed at achieving this objective are intended to have as outcomes the following:

(1) Students will be able to identify their value stance on a variety of issues concerning how they personally might cope with loss and change during middle and later life (e.g. mid-life career change, launching children, caring for aged parents, retirement, loss of spouse, serious illness, etc.).

(2) Students will be able to identify and explain the rationale underlying alternative value stances on these issues.

(3) Students will take a public stand on these issues and explain why they favor one value stance over other.

(4) Students will become less prone to believing stereotypes concerning age decrements and view their own life course as being characterized by continuity rather than discontinuity.

(5) Students will feel less anxiety concerning their personal aging.

Activities. Classroom activities which would promote these outcomes are plentiful. Much of the literature on "values clarification" contains useful suggestions for relevant activities (Hawley, 1975; Howe, 1975; Lewis, 1970; Sax, 1972; Simon, 1975; Stevens, 1971; Gordon, 1975). In addition to these references, the books we have found most helpful in this regard are Values Clarification, by Simon, Howe and Kischenbaum (1972) and Perspectives on Counseling Adults: Issues and Skills, by Schlossberg, Troll, and Leibowitz (1978). Examples of activities from these two references which have been or can be easily adapted to a course on adult development and aging include the following:

(1) 10 Things: Students list 10 things they fear about growing old together with an additional 10 aspect of aging they feel would be rewarding. Palmore's (1979) article on the advantages of aging can be used as the basis for subsequent discussion.

(2) Values Voting or Opinion Survey: Students are presented with a list of issues or statements concerning the aging process and/or the aged which have a value-laden or attitudinal basis. Students are then asked to vote (usually by "secret" ballot) on whether or not they agree or disagree with the statement or to state an opinion concerning a particular issue. We have found that the Facts on Aging Quiz (Palmore, 1977) provides a good format for this activity, as does the Attitudes Toward Menopause (Neugarten, Wood, Kraines, & Loomis, 1968) and the Age Norms Inquiry (Schlossberg, et al., 1978). Regardless of the instrument used, the ultimate goal is to indicate that a plurality of values and opinions exist among class members. Discussion following these activities should focus on reasons why similarities and differences exist among students.

(3) Rank Order/Either-Or Forced Choice. Students are presented with alternative solutions to coping with change or loss during adulthood (e.g. retirement, loss of a spouse, decline in health, etc.) and are asked to either rank order the solutions in order of preference or to choose from among them the one solution which they feel most comfortable with. Reasons for particular choices should be made public in subsequent class discussion.

(4) Values Journal/Data Bank: Students maintain a journal of insights they gain throughout the course concerning their own personal aging and/or the aging experience of others whom they interview. A suggested structure

for the maintenance of the journal would be to identify major life transitions or events and to describe preparations for or responses to these transitions.

(5) Pattern Search: Recognizing there is some continuity in patterns of behavioral response to environmental conditions throughout life (Neugarten, 1965). Students may be asked to describe how they have coped with loss and change in the past, to examine these descriptions for patterns of response, to search for underlying value systems which have led to these patterns, and to extrapolate from these data a description of how they might cope with similar transitions throughout adulthood.

(6) Values Continuum: The instructor identifies the polar extremes of an issue (e.g. mandatory versus voluntary retirement) and presents these opposing positions as opposite ends of a continuum (perhaps a seven-point Likert scale). Students are asked to indicate the point on the scale which best represents their current position concerning the issue. A rationale should be presented by each student for why he/she has adopted that particular stance and the conditions under which a change in position or opinion might occur.

(7) Classroom Interviews: Students are interviewed by the teacher, other students, or older adults concerning their positions on certain issues concerning their personal aging trajectory and/or their attitudes toward other older age groups. Interviewers are encouraged to probe for reasons why particular value positions or attitudes are held. Interviewees reserve the right not to answer questions and to ask similar questions of the interviewer.

Objective #2: To Learn Empathy for Individuals Representing Different Generations and Periods of Adulthood

Rationale. Two important goals of any gerontological curriculum are to promote positive intergenerational relationships and to enhance individual adjustment to aging. Both are dependent on the magnitude of intergenerational differences and, to an even greater extent, on the ability of those involved to bridge these differences through empathic understanding. Unless checked through the exercise of mutual understanding and appreciation, intergenerational differences become magnified or blown out of proportion by ageism, an insidious social disease that breeds discrimination on a societal level and often erupts in conflict among family members -- hardly optimal conditions for good intergenerational relations or successful adjustment to aging.

Expected outcomes. Perhaps the single most important outcome expected from activities designed to achieve this objective is the following:

(1) Students will be able to empathize with those who have preceeded them in the life course, to see life as others have experienced it and to appreciate the uniqueness of their response to life changes.

Empathy may be conceptualized as being either emotional or cognitive (Klemer and Smith, 1975). Emotional empathy is the understanding and appreciation one person or generation has for another which is brought out of shared experiences, but of simulated or vicarious experiences and generalizations of human behavior.

Although ideal would be to have all generations be able to feel emotional empathy for others, this is not a realistic expectation. Granted, to a certain extent the phenomenon of role convergence provides the basis for some shared experiences among generations. A son develops greater emotional empathy for his father as a parent when he, the son, becomes a parent.

But there is a time lag in the development of this empathy. At any one point in time, the shifting statuses and responsibilities or social roles throughout the life course results in attitudinal and behavioral differences among those representing different periods of the life course.

Moreover, during periods of rapid social change, it may not even be possible to bridge generational differences through role convergence. The interaction between a constantly changing socio-historical milieu and ontogeny minimizes the possibility of generalizing the experiences of adult life from one generation to another (Bengtson & Black, 1973). The experience of young adulthood for today's college students is in many ways different than what it was for their parents several decades ago. Similarly, the mid-life experiences of today's parents may be very different from the mid-life encounters their son and daughters will have in the future.

In sum, we are arguing that since the nature of intergenerational differences makes it difficult if not impossible to achieve an empathic understanding among the generations at an emotional level, the outcomes expected from this objective is some degree of cognitive rather than emotional empathy.

Perhaps the best example of what we mean here by cognitive empathy is found in Britton's plea several years ago that an important responsibility or task in teaching young adults is to encourage them to both <u>understand</u> and <u>appreciate</u> those generations which have preceded them in the life course. To understand another generation is to be able to grasp the meaning and comprehend the inner significance of the life course as it was and is experienced by members of that generation. To appreciate another generation is based upon understanding, but it is more than simply having the facts at hand or comprehending them. Appreciation for another generation involves

a comprehension that reflects a certain amount of esteem and respect. It is not a blind endorsement of all that another generation has done or is doing, but it is the acceptance of another generation based upon being able to see why they did or are doing the things they are. Hence, the specific outcomes expected from this objective are the following:

(1a) Students will be able to understand other generations which have preceded them; that is, they will be able to grasp the meaning of and comprehend the inner significance of the life course of persons in other (older) age groups; and

(1b) Students will be able to express appreciation for other generations which have preceded them; that is, they will be able to understand other generations in such a way as to admire or accept their behaviors and attitudes as a meaningful response to their life experiences.

Activities. Some of the activities which could be used to promote these outcomes are the following:

(1) Simulated Sensory Loss and Change: Students participate in a variety of techniques (e.g. the wearing of special goggles or eyeglasses, cotton in the ears, etc.) which simulate sensory loss among older generations. By participating in these simulations, students gain greater insight into the behavioral and psychological consequences of sensory loss and learn to appreciate compensatory coping mechanisms which offset such loses. Perhaps the best description and summary of training programs using these techniques is found in an article by Shore (1976).

(2) "Roots" - Genealogical Research and Family History: Students are asked to trace their family lineage back several generations. This they are to do through interviews with parents, grandparents, etc., and through

the use of family documents (diaries, journals, collections of poetry, etc.) and historical records. Beyond the identification of names and vital statistics, students are to collect information about the life experiences of parents, grandparents, etc. and to outline the social and historical conditions surrounding the birth, childhood, and young adulthood of their parents and grandparents. We have found that Elder's (1974) book, Children of the Great Depression, provides students with a good look at the world conditions in which their parents and grandparents grew up.

Objective #3: To Expand Future Time Perspective

Rationale. While not necessarily true of all students, the young adults we have observed in introductory gerontology courses typically do not have a future time perspective or planning horizon that extends very far beyond the present. Many are looking forward to getting a job and to marriage, but future anticipations rarely extend to periods of mid-life and hardly ever to old age and death. We have also observed that many students have a sense of cognitive futurity, but not personal futurity (Kastenbaum, 1963). They envision the future, but it is often an anticipation that is relatively devoid of personal actions they may take or events they with some probability will experience or the consequences of those actions or experiences.

We posit this objective as being important because we intuitively feel that it is beneficial for students to expand their planning horizons and think about the life changes and transitions they will or might experience from the present time until they die. Our assumption is that as future time perspective expands and students actively entertain notions of what life events they will encounter and how they might cope with these events, then the probability is increased they will be motivated to and better able to

plan for these life transitions. The more intensely they become engaged in thinking about their personal futures, the more likely they will be to successfully adjust to the process of aging.

Expected outcomes. Activities aimed at achieving this objective are intended to produce the following outcomes:

(1) Students will increase their temporal orientation such that they will attach at least as much importance to the future as they do to the past and present.

(2) Students will expand or extend their future time perspectives to include events which they will encounter through middle and later adulthood.

(3) Students will increase their commitment to the future by becoming more willing to plan for future life events.

(4) Students will be able to better integrate their past, present and future life experiences; that is, they will be able to view their future as being somewhat continuous with their past and present life experiences.

(5) Students will increase their willingness to predict and plan for future life events.

Activities. The following activities are designed to achieve these outcomes:

(1) A Personal Life History. Students are asked to write a description of their past life, from birth until the present. Their descriptions should include important life events and turning points as well as why these events or turning points are significant. This activity is similar to the Pattern Search Activity listed under the first objective. The intent is to encourage the student to look for the values and life themes which have characterized the way he/she has coped with life changes up to the present time.

The writing of a personal life history may appear to be a strange means of extending future time perspective, but this strategy is based on the finding in time perspective research that it is partially out of our reconstruction of the past that we create images of the future (Cottle & Klinebergy, 1974; Jacques, 1956). Future time perspective is foreshortened when something severs the past from the present, when meaning for the future cannot be derived from the past or the present. Temporal integrity is a requisite for a sense of futurity.

(2) Life Line. Students are asked to draw a horizontal line across a sheet of paper and to imagine that this line represents their life course. They are asked to indicate points on the line which represent their birth and death and to estimate the length of the interval between these two points. Students then proceed to identify their present position the line and to identify significant turning points, past and future, in their lives. Students then share with others their life lines and explain the significance of past and impending life events.

(3) Epitaph/Obituary. Students are asked to write what they feel would be an appropriate inscription on their own tombstone or to describe what might be included in an obituary upon their death. Both exercises are intended to encourage the student to view his/her life from the perspective of an imagined death and to raise issues about the quality of one's life viewed in retrospect.

Objective #4: To Choose Among Alternative Courses of Action After Considering Their Likely Consequences

Rationale. We feel that one of the requisites to coping with life changes is to be aware of alternative course of action and their consequences. To be

faced with the care of an aged parent, but to perceive institutionalization as the only recourse to alleviate the burden of caretaking is a less preferable situation that an awareness of a variety of alternatives for obtaining respite care for a parent. One of the basic points to be made in an introductory gerontology course of the nature we are describing is that while science cannot provide an answer to moral or value questions concerning aging and the aged, it can often help in anticipating probably consequences of acting or behaving one way or another.

Expected outcomes. The emphasis in this objective is on helping students to see value in and to learn to apply empirical generalizations from research to their personal lives. Valuing and learning to apply empirical generalizations from research is a very different skill than the cognitive talks involved in memorizing and recalling the findings of certain studies in a test situation. Expected outcomes from this objective include the following:

(1) Students will be able to identify alternative means for coping with anticipated life changes (e.g. retirement involuntary mid-life career change, the loss of a spouse, etc.).

(2) Students will be able to identify the consequences of alternative means for coping with anticipated life changes.

(3) Students will select one strategy or means of preparing for and coping with each anticipated life change and explain why this particular strategy or course of action is best suited for them.

Activities. Activities designed to produce these outcomes include the following:

(1) Anticipated Autobiography. Students are asked to write about their anticipated future lives, identifying the major social, psychological and physiological changes they feel they will encounter between the

present time and the time they die. In addition to this inventory of anticipated changes their autobiographies are to also include an analysis of alternative means of coping with these changes together with the identification of the coping mechanisms and strategies the student feels most comfortable with.

(2) Consequences Search Strategy: This activity is suggested by Simon, et al. (1972). Students are asked to identify a particular solution to a problem or life change which might be encountered by a middle-aged or older adult (e.g. deciding to institutionalize an aged parent). Student discussion then centers on the consequences -- both positive and negative -- of pursuing that particular course of action.

MEASURING AFFECTIVE OUTCOMES

Instruments

Briefly described below are several instruments which could be used to measure some of the aforementioned outcomes.

(1) Aging Opinion Survey (AOS): The AOS is an attitude scale measuring three factors: (a) Sterotypic Age Decrement, reflecting the perceived aging of peers and known others, (b) Personal Anxiety Toward Aging, reflecting an outlook on one's own aging, and (c) Social Value of the Elderly, reflecting attitudes toward the elderly as a general other group (Kafer, Rakowski, Lachman, and Hickey, in press). The AOS consists of 45 statements. For each statement, students indicate on a Likert-type scale the extent to which they agree or disagree with the statement.

(2) Self-Descriptions at Different Life Periods: Students are presented with a semantic differential scale consisting of a list of 32 adjective pairs, each pair set on a seven-point Likert-type scale. The adjective pairs are adapted from the Tuckman and Lorge (1956) attitude toward aging

Two additional dimensions of time perspective measured by the questionnaire are extension and density. Temporal extension referred to how far into the future a student projects his/her life. Density refers to the number of anticipated future life events. To some extent, the previously mentioned Experiential Inventory can be used to measure temporal extension and density. However, since the Inventory limits the number of life experiences to ten and allows the student to view these experiences in the context of the past and present as well as the future, additional items are included in the TPQ to assess future extension and density (Rakowski, Barber, Seelbach, in press). For example, students are asked to list as many future life events as they can and to identify for each event the likelihood or probability that it will occur in their lives. Two similar items are also included in the TPQ. One asks the student to indicate how far (e.g. minutes, hours, days, weeks, years, etc.) into the future he/she is thinking at the present time. Another requests the student to indicate how far into the future he/she is actually planning for.

Another dimension of time perspective -- and perhaps the most difficult to measure -- is temporal integration or the relatedness a student perceived among the past, present and future temporal spheres. Used for measuring temporal integration in the TPQ is the Circles Test developed by Cottle (1967). In the Circles Test, students are asked to think of the past, present and future as being in the shape of circles and to arrange these circles in any way they want which best shows how they feel about the relationship among the temporal spheres of the past, present and future. Students are also asked to label the circles they have drawn. Scoring of the Circles Text is somewhat complicated, but suffice it to say here that temporal integration may be measured by the degree or amount of overlap among the circles. The greater the overlap, the greater the assumed relatedness or integration among the time zones.

inventory. For each adjective pair, students are asked to place a check mark along the scale which best describes how they view themselves as a young adult. Students repeat this process on at least two additional scales, one where they are to describe themselves as a middle-aged adult and one as an older adult.

(3) Attitudes Toward Planning Scale (ATPS): The ATPS was developed by Surra and Gerli g (19) and is designed to measure a person's attitude toward life planning. Students indicate for each of 24 statements whether for them that statement is true or false. Responses are coded such that a high score indicates a more positive attitude toward planning one's life.

(4) Time Perspective Questionnaire (TPQ): This questionnaire consists of a combination of several instruments designed to measure different dimensions of a student's time perspective. One of these dimensions is temporal orientation, or the relative importance to the student of the past, present and future. Temporal orientation is measured in part by Cottle's (1968) Experential inventory. Students are asked to list the ten most important experiences in their lives. They are informed that these may be past, present or future experiences. After listing these experiences, they are asked to identify which of the following temporal zones best describes the occurrence of each experience they have listed: distant past, near past, present, near future, and distant future. The extent to which a student is future oriented is measured by the number of experiences he/she lists as occuring either in the near or distant future. Another more direct means of assessing temporal orientation was employed by Rakowski, Barber and Seelbach (in press). Students are simply asked to rank the past, present, and future in order of importance (i.e. most important, next important, least important).

The last part of the TPQ deals with a student's willingness to predict future events. Of greater importance here is not what future events students are willing or unwilling to predict, but the attitude they assume concerning whether or not they are willing at all to predict the future. In essense, this part of the TPQ is designed to measure a student's predisposition to commit himself/herself with some certainty to future life outcomes. The items are taken from Cottle's (1969) Future Commitment Scale. Students are presented with 31 statements and asked to agree or disagree with each statement, or to mark a third option, "can't say". The statements describe events whose outcomes no one presently could know. Seven of the statements refer to personal issues ("my children will become successful), and the remaining 24 deal with social issues (e.g. Russia and America will live in peaceful co-existence).

A Note on Student Evaluation

As Mager (1968) has reminded us, what we test for is the real indicator of what our objectives are. If we claim to be working toward attitudinal changes in our classes, but continue to give knowledge-oriented examinations, we are being inconsistent and students will continue to focus on the knowledge aspects of the course. However, one cannot grade on the basis of attitude change in students. This would be both unethical and impossible to do validly because the students would quickly learn to give the desired attitude response regardless of whether it reflected their true stance.

To circumvent this dilemma, the model we are proposing here contains no knowledge examinations as a basis for assigning student grades. Attitudes are assessed before and after the course to determine if the course objectives have been accomplished. Individual grades for the course are awarded on the basis of the number of class activities students satisfactorily completed by the student.

The grading system involves arriving at a contract with each student at the beginning of the course. The contract specifies the grade the student desires to work toward and the specific activities he/she must complete satisfactorily in order to earn that grade. When a particular project or activity is completed by the student, it is submitted to the instructor and reviewed in light of the specifications in the contract to determine if the student's work is satisfactory. If unsatisfactory, the student is asked to correct or alter it in some way and re-submit it. No grade is awarded for a particular project. When all the projects are satisfactorily completed, the grade agreed to in the contract is awarded.

REFERENCES

Bein, D. J. Beliefs, attitudes and human affairs. Monterey, Calif.: Brook/Cole Pub. Co., 1970.

Bengtson, V. L. and Black, K. D. Intergenerational relations and continuities in socialization. In P. B. Baltes and K. W. Schaie (Eds.), Life-Span developmental psychology: Personality and socialization, New York: Academic Press, 1973.

Britton, J. H. Teaching for intergenerational understanding. A paper presented at the Annual Education Conference, Mansfield State College, Mansfield, Pennsylvania, April, 1977.

Cicchetti, D. V., Fletcher, C. R., Lerner, E. and Coleman, J. V. Effects of a social medicine course on the attitudes of medical students toward the elderly: A controlled study. Journal of Gerontology, 1973, 28, 370-373.

Cottle, T. J. The circles test: An investigation of temporal relatedness and dominance. Journal of Projective Techniques and Personality Assessment, 1967, 31, 58-71.

Cottle, T. J. The location of experience: A manifest time orientation. Acta Psychologica. 1968, 28, 129-149.

Cottle, T. J. Future orientations and avoidance: Speculations on the time of achievement and social roles. Sociological Quarterly, 1969, 10, 419-437.

Cottle, T. J. and Klineberg, S. L. The present of things future: Explorations of time in human experience. New York: The Free Press, 1974.

Elder, G. H. Jr. Children of the Great Depression. Chicago: University of Chicago Press, 1974.

Elms, A. C. Role playing, reward and attitude change. New York: Van Nostrand Reinhold, 1969.

Fletcher, C. R., Cicchetti, D. V., Lerner, E., and Coleman, J. V. Effects of a social medicine course on the attitudes of medical students toward the elderly: A controlled study (Abstract), Gerontologist, 1971, (part II), 34.

Gordon, S. You! The psychology of enhancing your social life, etc. New York: Times Book Co., 1975.

Hawley, R. C. Value exploration through role playing. New York: Hart Publishing Company, 19 .

Heinkel, O. A. Evaluation of simulation as a teaching device. Journal of Experimental Education, 1970, 38, 32-36.

Howe, L. W. Human values in the classroom. New York: Hart Publishing Company, 1975.

Hudis, A. An introductory course in gerontology. Gerontologist, 1974, 14, 312-315.

Jacques, E. Measurement of responsibility: A study of work, payment and individual capacity. London: Tavistock, 1956.

Kafer, R. A., Rakowski, W., Lachman, M., and Hickey, T. Aging Opinion Survey: A report on instrument development. International Journal of Aging and Human Development (in press).

Kastenbaum, R. Cognitive and personal futurity in later life. Journal of Individual Psychology, 1963, 19, 216-222.

Klemer, R. H. and Smith, R. M. Teaching about family relationships. Minneapolis, Minn.: Burgess Publishing, 1975.

Lewis, H. R. Growth games. New York: Bantam Books, 1970.

Livingston, S. A. and Kidder, S. J. Role identification and game structure: Effects on political attitudes. Simulations and Games, 1973.

Looft, R. Reflections on intervention in old age: Motives, goals and assumptions. Gerontologist, 1973, 13, 6-10.

Mager, R. F. Developing attitude toward learning. Palo Alto, Calif.: Fearon Pub., 1968.

Neugarten, B. L. Personality changes in the aged. Catholic Psychological Record, 1965, 3, 9-17.

Neugarten, B. L., Wood, V., Kraines, R. J. and Loomis, B. Womens attitudes toward the menopause. In B. L. Neugarten (Ed.) Middle Age and Aging. Chicago: University of Chicago Press, 1968.

Palmore, E. Facts on aging: A short quiz. Gerontologist, 1977, 17, 315-320.

Palmore, E. Advantages of aging. Gerontologist, 1979, 19, 220-223.

Rakowski, W. R., Barber, C. E. and Seelbach, W. C. Response formate and coding procedures in time perspective research. Journal of Perceptual and Motor Skills (in press).

Raths, L. E. Meeting the needs of children. Columbus, Ohio: Chas. E. Merrill, 1972.

Ringness, T. A. The affective domain in education. Boston: Little, Brown and Co., 1975.

Sax, S. Reality games. New York: Popular Library, 1972.

Schlossberg, N. K., Troll, L. E., and Leibowitz, Z. Perspectives on counseling adults: Issues and skills. Monterey, Calif.: Brooks/Cole Publishing Co., 1978.

Shore, H. Designing a training program for understanding sensory losses in aging. Gerontologist, 1976, 16, 157-165.

Simon, S. B., Howe, L. W., and Kirschenbaum, H. Values clarification: A handbook of practical strategies for teachers and students. New York: Hart Publishing Company, 1972.

Stevens, J. O. Awareness. Bantam Books, 1971.

Surra, C. and Gerling, S.

Tuckman, J. and Lorge, I. Perceptual stereotypes about life and adjustments. Journal of Social Psychology, 1956, 43, 239-245.

Wager, W. Instructional design and attitude learning. Educational Technology, 1979, , 51-53.